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**The depression of the demarcation potential of cat's tibialis by bistrimethylammonium decane diiodide (C 10).** By G. L. BROWN, W. D. M. PATON and M. VIANNA DIAS. *National Institute for Medical Research, Hampstead, London, N.W. 3*

Demarcation potentials (Brown & Goffart, 1948) and twitch tension of tibialis in cats anaesthetized with chloralose were recorded. After arterial injection of  $2\mu\text{g}$ . C10 (Paton & Zaimis, 1948), demarcation potential fell by 30–50%, rapidly for 10–15 sec., then slowly to a minimum at 5–10 min., recovering in 20–30 min. *pari passu* with the neuromuscular paralysis. Similar falls followed 30–40  $\mu\text{g}$ ./kg. C10 intravenously. No dose, however big, caused a depression exceeding 60%. Small doses, producing only potentiation of muscle twitch, also elicited a small fall in demarcation potential. At least 5 mg. KCl intra-arterially was required to produce a comparable maximum depression of demarcation potential.

Large doses of C5 arterially or intravenously had no action on demarcation potential, and only slightly antagonized depression of demarcation potential by C10, although the twitch tension of the paralysed muscle rapidly returned to normal. *d*-Tubocurarine chloride caused a small increase in demarcation potential (about 5%); eserine and prostigmine had no significant effect.

#### REFERENCES

- Brown, G. L. & Goffart, M. (1948). *J. Physiol.* **108** (in the Press).  
 Paton, W. D. M. & Zaimis, E. J. (1948). *Nature, Lond.*, **162**, 810.

